Blood test can help some bowel cancer patients avoid unnecessary drug side-effects

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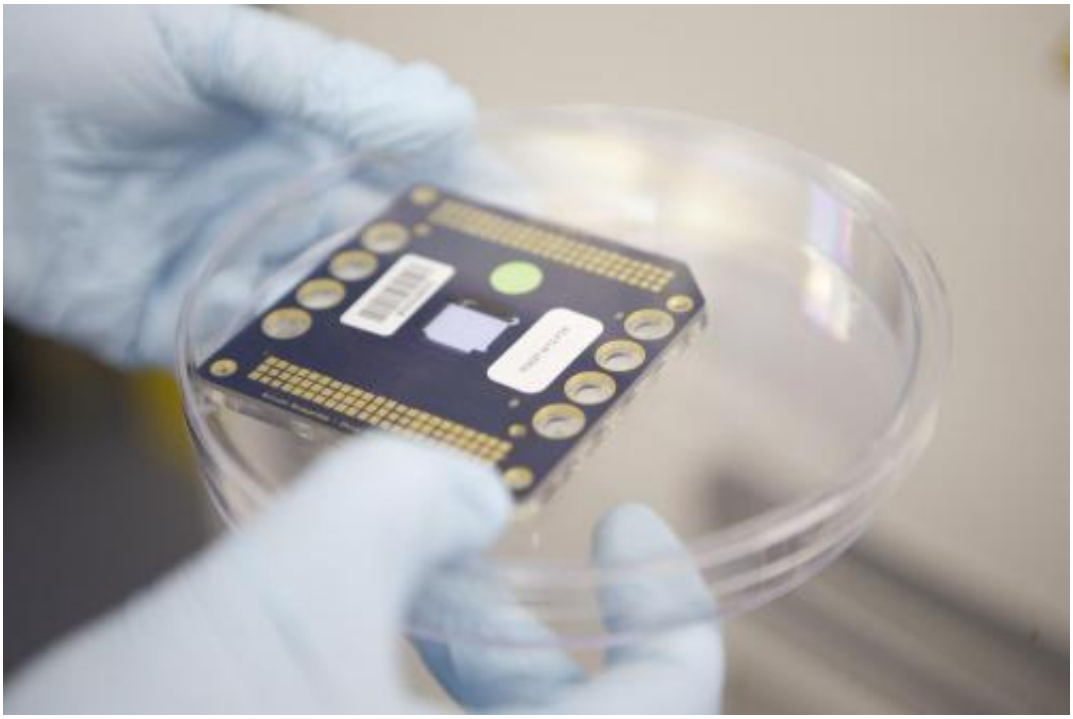

Equipment used to analyse circulating tumor cells. Credit: The University of Manchester

Manchester researchers have provided early evidence to suggest that a blood test could be used to identify bowel cancer patients that may benefit from more intensive chemotherapy.

Colorectal, or bowel, cancer is the second biggest cancer killer in

Europe. It is most commonly treated with a combination of chemotherapy agents, and outcome can be improved by using additional drugs. However, this multi-drug approach can increase side-effects such as hair loss, low white blood cell count, diarrhoea and damage to the peripheral nervous system.

The team from Manchester counted tumour cells in a patient's blood sample as a way of predicting who might benefit most.

Professor Caroline Dive, from the Cancer Research UK Manchester Institute at The University of Manchester - part of the Manchester Cancer Research Centre - who jointly led the study, said: "Here in Manchester we are interested in detecting cancer cells that have been shed from a patient's tumour and are circulating in their blood. In this study we wanted to see if the number of tumour cells in a blood sample could be linked to how well patients respond to intensive chemotherapy."

The group looked at patients with advanced colorectal cancer who received a four-drug combination treatment. They confirmed that those patients with three or more circulating tumour cells (CTCs) in their blood sample had a lower overall survival, compared with those patients who had fewer than three CTCs. The team also presented data that suggested that patients with a higher CTC count before treatment could benefit more from this more intensive treatment regimen.

Dr Mark Saunders, a Consultant Oncologist from The Christie NHS Foundation Trust, who also led the study, said: "Our initial results suggest that this test could prove useful for patient selection and we should now validate it in further larger trials of new treatments for bowel cancer."

Dr Matt Krebs, Clinical Senior Lecturer at The University of Manchester and part of the study team, added: "These studies are

important for the development of a more personalised treatment approach for cancer patients where patients receive the treatments most likely to benefit them."

More information: Paper entitled "Circulating tumour cell enumeration in a Phase II trial of a four-drug regimen in advanced colorectal cancer" Krebs MG et al. (2015) *Clinical Colorectal Cancer*. DOI: 10.1016/j.clcc.2014.12.006

Provided by University of Manchester

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